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WATER SUPPLY OUTLOOK FOR OREGON

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

APR. 1, 1970

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

CONSERVATION OF WATER

WATER SUPPLY OUTLOOK FOR OREGON

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

APRIL 8, 1970

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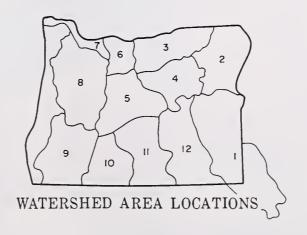
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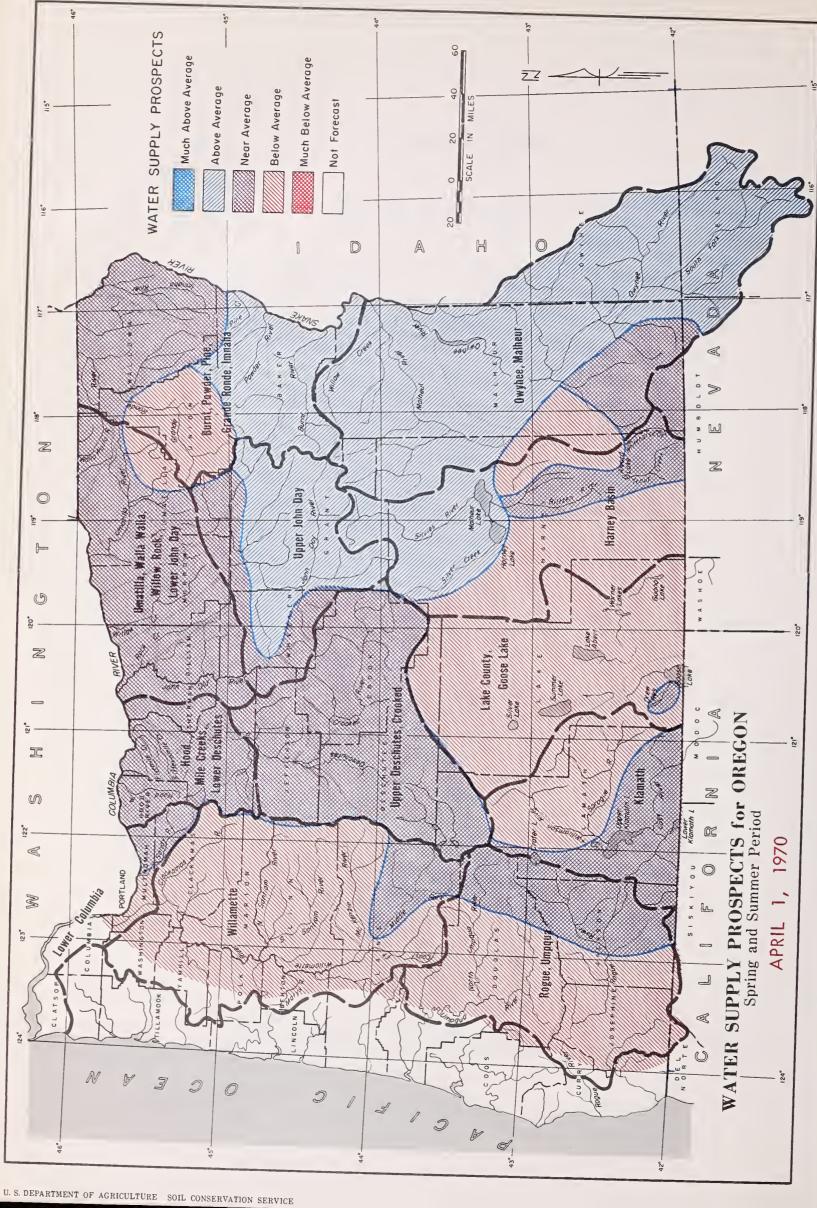
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WATER SUPPLY OUTLOOK for OREGON

APRIL 1, 1970

The water supply picture remains nearly the same as last month. Oregon water users will generally have below average supplies west of the Cascade crest and in the southcentral part of the state. Excellent supplies are forecast for Grant, Baker, and Malheur counties, while the remainder of the state will experience near normal water supply conditions. The snowpack is average to excellent at higher elevations and non-existant in the foothills.

SNOW COVER

The high elevation snow continues to be average to above average in eastern Oregon. Snow courses along the crest of the Cascades received below normal amounts during March and are now 80 to 90 percent of what is normally measured on April 1. Almost all low and median elevation courses reported below average water contents.

SOIL MOISTURE

Soil moisture is still near average over most of the state. Valley soils are beginning to dry in some areas of the state but this is expected this time of year.

PRECIPITATION

The eastern one-third of the state benefited the most from rainfall in March. Here it was 100 to 125 percent of average. Central Oregon precipitation was half of what is normally received during the month, while the rest of Oregon ranged from 70 to 85 percent of average. Winter precipitation has been mostly above average in eastern Oregon and near average west of the Cascades.

RESERVOIR STORAGE

Reservoirs will provide excellent supplies of water for Oregon's thirsty crops this summer. On April 1 twenty-six reservoirs contained 2,858,000 acre-feet of water. This is 30 percent or 636,000 acre-feet over what is normally stored on this date.

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continued--

STREAMFLOW

Oregon's streams produced 70 to 120 percent of average flows during March. The highest occurred in eastern Oregon and the low west of the Cascades.

Representative April-September streamflow forecasts are as follows:

	Forecast	Percent
	1000's A.F.	1953-67 Average
Malheur near Drewsey	99	138
Owyhee net Inflow	350	117
Umatilla at Pendleton	119	77
Grande Ronde at La Grande	144	82
Upper Klamath net Inflow	465	81
Rogue near Raygold	765	81
Willamette, Mid. Fk. below N.	Fk. 630	76
Deschutes at Benham Falls	470	79
John Day, Mid. Fk. near Ritter	138	119

This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, U. S. Weather Bureau and other cooperators.





WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS

OREGON

*as of*APRIL 1, 1970

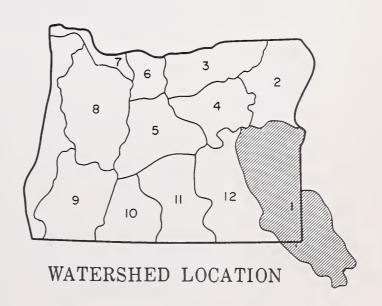
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OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

MOST IRRIGATORS AND OTHER WATER USERS IN MALHEUR COUNTY WILL HAVE EXCELLENT WATER SUPPLIES THIS SUMMER. MAJOR RESERVOIRS ARE NEARLY FULL AND SUMMER STREAMFLOW ON THE MALHEUR AND OWYHEE RIVERS WILL BE 120 TO 130 PERCENT OF AVERAGE. THE SNOW COVER IS 100 PERCENT ON THE OWYHEE, 120 PERCENT ON JORDAN CREEK, AND 130 PERCENT ON THE MALHEUR. PRECIPITATION DURING MARCH WAS 115 PERCENT OF NORMAL AND HAS BEEN 130 PERCENT OF AVERAGE DURING THE WINTER MONTHS. SOIL MOISTURE IS NEAR AVERAGE THROUGHOUT THE COUNTY. INFLOW INTO OWYHEE WAS 78 PERCENT OF AVERAGE. THIS WAS DUE TO THE COLD TEMPERATURES THAT OCCURRED ON THE UPPER WATERSHED DURING THE MONTH.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow Period			
STREAM or AREA	Spring Season	Late Season		
Boulder Creek Bully Creek Cow Creek Jordan Creek Jordan Valley Irrig. Dist. McDermitt Creek Oregon Canyon Creek Owyhee Project Succor Creek Tenmile Creek Vale-Oregon Irrig. Dist. Warmsprings Irrig Dist. Willow Creek (Reservoired)	Excellent Excellent Average Excellent Excellent Average Excellent Average Excellent Average Excellent Excellent Excellent	Average Average Average Average Average Average Excellent Average Average Average Average Average Average		



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.

PORTLAND, OREGON 97205

TREAMFLOW FORECASTS		THIS YEA	R	PAST F	RECORD	
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
Jordan Creek above Lone Tree Creek Malheur near Drewsey	100 98	118	April-July April-July	<u>ь</u> 102	85 ^{<i>m</i>} 71	
Malheur, North Fork at Beulah	99 73 80	138 133 133	April-Sept. April-July	103 83	72 55	
Owyhee Reservoir, net Inflow	330 350	117	April-Sept. April-July April-Sept.	89 723 741	60 281 300	

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Usable Storage

32.0

35.3

29.7

482.2

62.8

Average

41.5

19.1

17.4

476.8

117.3

FUREGAST DATE OF LOW	FLUW TAL	UE3		RESERVOIR STOR	IAGE (Inousand	AC. Ft.)
FORECAST POINT	Low Flow Value	Ju Calli Willi	Average Date of Low Flow	RESERVOIR	Usable	U
	Second/Ft.	Recede to Low Flow Value	Value į	RESERVOIR	Capacity	This Year
Owyhee near Rome	1000 250	May 24 June 24	May 24 June 20	Agency Valley Antelope Bully Creek Owyhee Warmsprings	60.0 55.0 30.0 715.0 191.0	55.1 39.8 27.3 698.3 168.0

RIVER BASIN	Number of	THIS YEAR'S as PERCI	ENT OF:
	Stations	Last Year	Average m
Jordan Creek Malheur River Owyhee River	1 3 1	92 79	97 80

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

APRIL 1, 1970

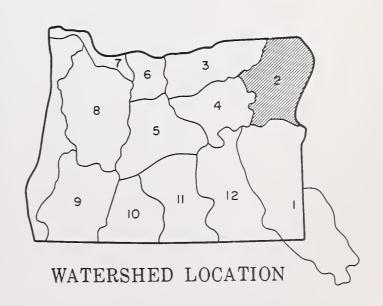
U.S.D.A.SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

MOST WATER USERS IN NORTHEASTERN OREGON WILL HAVE AVERAGE TO EXCELLENT SUPPLIES THIS COMING SUMMER. SNOW COVER RANGES FROM 125 PERCENT ON THE BURNT AND POWDER RIVERS, DOWN TO 55 PERCENT ON THE GRANDE RONDE. RESERVOIRS ARE STORING EXCELLENT AMOUNTS FOR APRIL 1 EXCEPT FOR WALLOWA LAKE. STORAGE AT WALLOWA LAKE WILL IMPROVE DURING APRIL AND MAY AS THE SNOWPACK MELTS. SOILS ARE SATURATED AND WATERSHEDS SHOULD RESPOND WELL TO SPRING PRECIPITATION. RAINFALL IN THIS AREA DURING MARCH WAS NEAR NORMAL. IT HAS BEEN 110 PERCENT OF AVERAGE FOR THE WINTER PERIOD. COLD TEMPERATURES DURING THE MONTH CAUSED BELOW AVERAGE STREAMFLOW IN THE AREA. THE MARCH FLOW OF THE GRANDE RONDE AT LA GRANDE WAS 79 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

Flow P	eriod
Spring Season	Late Season
Excellent Excellent Excellent Average Excellent Excellent Excellent Excellent Average Excellent Average Average Excellent	Average
	Excellent Average Excellent Average Average Excellent



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PORTLAND, OREGON 97205

STREAMFLOW FORECASTS		THIS YEAR	3	PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
Bear near Wallowa	71	108	April-Sept.	<i>b</i>	66	
Burnt near Hereford	48	141	April-July	Ь	34	
Darie Hoar Horozofa	.49	140	April-Sept.	ь	35	
Catherine near Union	79	123	April-Sept.	72	64	
Eagle Creek above Skull Creek	200	119	April-July	179	168 m	
	216	119	April-Sept.	192	182 ^m	
Grande Ronde at La Grande	140	81	April-July	224	172	
	144	82	April-Sept.	227	175	
Hurricane near Joseph	47	100	April-Sept.	ь	47	
Imnaha at Imnaha	318	104	April-Sept.	ь	307	
Lostine near Lostine	125	100	April-Sept.	ь	125	
Powder near Baker	74	123	April-July	b	60	
	76	122	April-Sept.	b	62	
Wallowa, East Fork near Joseph	9.3	98	April-July	ь	9.5	
	11.7	98	April-Sept.	Ь	12.0	

SOIL MOISTURE

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

COIL MOISTURE				RESERVOIR STORAGE (housand	Ac. Ft.)	END OF	МОИТН
RIVER BASIN	Number	THIS YEAR	S MOISTURE CENT OF:	RESERVOIR	Usable		Jsable Sto	rage
RIVER BASIN	Stations	Last Year	Average 70	RESERVOIR	Capacity	This Year	Last Year	Average
Burnt, Powder	2	118	111	Thief Valley	17.4	17.4	17.4	4
Grande Ronde, Catherine		110		Unity	25.2	23.4	19.	
Cr., Imnaha River	2	113	108	Wallowa Lake	37.5	14.6	29.	
,				Phillips Lake	73.5	45.5	19.	
				SUMMARY of SNOW M		ENTS		
				(COMPARISON WITH PREVIOU	Numbe	r of	THIS YEA	AR'S SNOW
				and∕or SUB-WATERSHED	Cour: Avera	ses W	St Year	Average *
				Grande Ronde River above La Grande Wallowa, Imnaha- Catherine Creek Powder River Burnt River	4 6 5 5		46 100 106 108	56 112 120 127

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

as of

APRIL 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

WATER USERS IN UMATILLA, MORROW, AND GILLIAM COUNTIES WILL HAVE MOSTLY AVERAGE SUPPLIES THIS SUMMER. EXCEPTIONS ARE WHERE STORED WATER IS AVAILABLE. IRRIGATORS WITH ACCESS TO THIS WATER WILL HAVE EXCELLENT EARLY SUPPLIES. THE SNOW COVER IN THE MOUNTAINS IS NEAR NORMAL ON THE WALLA WALLA RIVER AND IT RANGES ON DOWN TO TWO-THIRDS OF AVERAGE PROCEEDING SOUTHWARD TO THE McKAY CREEK DRAINAGE. RAINFALL WAS 10 PERCENT ABOVE NORMAL DURING MARCH AND HAS BEEN AN EXCELLENT 125 PERCENT OF AVERAGE DURING THE NOVEMBER-MARCH WINTER PERIOD.

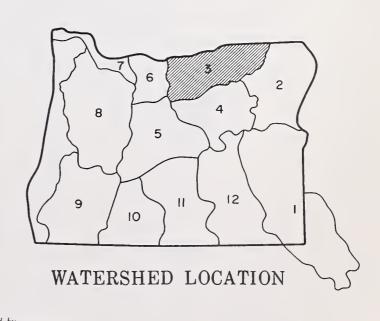
SOIL MOISTURE IS GOOD OVER THE MOUNTAINOUS AREAS OF THE WATERSHEDS.

THE FLOW OF THE UMATILLA AT PENDLETON WAS NEAR NORMAL DURING THE MONTH.

RESERVOIRS ARE STORING SUPPLIES 20 PERCENT ABOVE AVERAGE FOR APRIL 1.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	erìod
STREAM or AREA	Spring Season	Late Season
Walla Walla River, No. Fork Walla Walla River, So. Fork Walla Walla River, Main	Average Average Average	Average Average Average
Walla Walla River, Little Couse Creek Dry Creek	Average Average Average	Average Average Average
Pine Creek Umatilla River, Main Wildhorse Creek	Average Average Average	Average Average Average
Umatilla R. (Cold Springs Reservoir) Umatilla River (McKay Res.)	Excellent Excellent	Average Average
McKay Creek Birch Creek Butter Creek	Average Average Average	Average Average Average
Willow Creek Rhea Creek Rock Creek (John Day	Average Average	Average Average
Tributary)	Average	Average



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

STREAMFLOW FORECASTS		THIS YEAR	3	PAST F	RECORD
	FORE	CAST	FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet			Last Year	Average i
Dutter Charles and Disc City	0.0	0.0	л	ь	0.0
Butter Creek near Pine City	. 8.0	93	April-July	<i>b</i>	8.6
McKay near Pilot Rock	21	75	April-Sept.	<i>b</i>	28
Umatilla near Gibbon	70	94	April-July		74
	75	94	April-Sept.	b	80
Umatilla at Pendleton	113	75	April-July	220	150
	119	77	April-Sept.	225	155
Walla Walla, North Fork near Milton	17.0	110	April-July	ь	15.4
	17.5	109	April_Sept.	b	16.0
Walla Walla, South Fork near Milton	59	109	April-July	b	54
	74	110	. April-Sept.	b	67

FORECAST DATE of LOW FLOW VALUES

RECERVAIR STARAGE (Thousand Ac Et) FAIR OF MONTH

TONIZONO: DITTE OF EOTH FEOTO			RESERVUIR STURAGE (THUUSAHU AC. FL.) END			END OF	MONTH		
FORECAST POIN	т	Low Flow Value	Forecast Date Stream Will	Average Date of Low Flow Value 10.	RESERVOIR	Usable		sable Stora	ge
		Second/Ft.	Recede to Low Flow Value	Value jį"	RESERVOIR	Capacity	This Year	Last Year	Average i
Umatilla at Pend	dleton	550	June 6	June 22	Cold Springs McKay	50.0 73.8	48.9 69.4	50.0 55.6	48.8 47.1
					,				
			·					111	
							i .		

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

				(COMPARISON WITH PREVIOUS YEARS)				
RIVER BASIN	Number of	THIS YEAR'S as PERCI		RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF	
	Stations	Last Year	Average m	SUB-WATERSHED	Averaged	Last Year	Average i	
Umatilla, Walla Walla, McKay Creek	3	100	99	McKay Creek Umatilla River Walla Walla River	3 3 2	44 60 83	66 86 109	

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of

APRIL 1, 1970

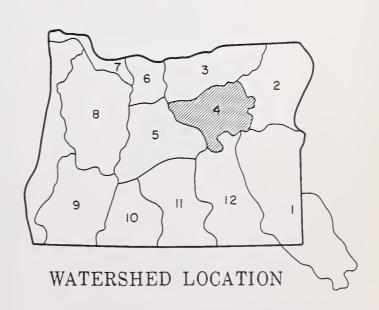
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GENERAL OUTLOOK

THE UPPER JOHN DAY BASIN WILL HAVE EXCELLENT TO AVERAGE WATER SUPPLIES THIS SPRING AND SUMMER. THE MOUNTAIN SNOWPACK IS 114 PERCENT OF AVERAGE ON THE NORTH FORK OF THE JOHN DAY, AND 123 PERCENT OF NORMAL ON THE JOHN DAY ABOVE DAYVILLE. MOUNTAIN SOILS ARE SATURATED AND WILL HELP PRODUCE GOOD SUMMER STREAMFLOW. PRECIPITATION DURING MARCH WAS 124 PERCENT OF AVERAGE FOR THE BASIN. THE APRIL-SEPTEMBER STREAMFLOW FORECASTS RANGE FROM 128 PERCENT OF AVERAGE ON THE JOHN DAY AT PRAIRIE CITY TO 118 ON STRAWBERRY CREEK NEAR PRAIRIE CITY. THE MARCH FLOW OF THE JOHN DAY AT SERVICE CREEK WAS 121 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	eriod
STREAM or AREA	Spring Season	Late Season
Beech Creek Beech Creek-Fox-Long Cr. Bridge-Mountain Creeks Camas Creek Cherry Creek Indian-Pine Creeks John Day River, Main Fork John Day River, Mid. Fork John Day River, N. Fork John Day River, S. Fork Monument-Kimberly Strawberry Creek	Average Average Average Average Fair Excellent Excellent Excellent Excellent Excellent Excellent Excellent	Average



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PORTLAND, OREGON 97205

STREAMFLOW FORECASTS		THIS YEAR	?	PAST RECORD		
DASIN STREAM and/or FORESCOT DOWN		CAST Percent of	FORECAST	THOUSAND A		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Average	PERIOD	Last Year	Average li	
John Day at Prairie City	54	128	April-July	Ь	42	
John Day, Middle Fork at Ritter	58 132	126 118	April-Sept. April-July	<i>b</i> 134	46 112	
	138	119	April-Sept.	137	116	
Strawberry near Prairie City	9.1 9.9	118 118	April-July April-Sept.	5.1 5.7	7.7 8.4	
		-				

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number	THIS YEAR'	'S MOISTURE CENT OF:	RIVER BASIN and/or	Number of	THIS YE WATER AS	AR'S SNOW PERCENT OF
	Stations	Last Year	Average m	SUB-WATERSHED	Averaged	Last Year	Average i
John Day abv. Dayville John Day, North Fork	Stations 6 2			John Day River, No. Fk. John Day abv. Dayville	Courses Averaged 7 5		

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS

OREGON

as of APRIL 1, 1970

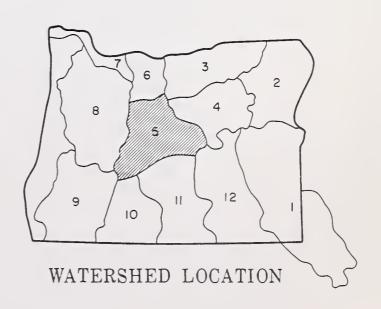
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OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

SUMMER WATER SUPPLIES FOR THE UPPER DESCHUTES AND CROOKED RIVERS WILL BE AVERAGE TO FAIR. THE SNOWPACK ON THE MOUNTAIN WATERSHEDS IS 83 PERCENT ON THE DESCHUTES AND 74 PERCENT OF AVERAGE ON THE CROOKED-LOW ELEVATION SNOW IS NEARLY GONE. OCHOCO BASIN. THE MARCH RAINFALL WAS 54 PERCENT OF NORMAL. MOUNTAIN SOILS ARE FILLED TO NEAR THEIR WATER-HOLDING CAPACITY. THE DESCHUTES AT MOODY FLOWED 93 PER-CENT OF AVERAGE AMOUNTS DURING MARCH. STREAMFLOW FORECASTS FOR THE APRIL THROUGH SEPTEMBER PERIOD ARE 96 PERCENT FOR THE CROOKED NEAR POST AND 79 PERCENT FOR THE DESCHUTES AT BENHAM FALLS. CRANE PRAIRIE AND WICKIUP RESERVOIRS HELD 96 PERCENT OF THE AVERAGE APRIL 1 STORAGE. CRESCENT LAKE HELD 86 PERCENT OF THE APRIL 1 AVERAGE. OCHOCO AND PRINEVILLE RESERVOIRS CONTAIN 135 PERCENT AND 128 PERCENT OF THE AVER-AGE STORED ON APRIL 1.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow F	eriod
STREAM or AREA	Spring Season	Late Season
Arnold Irrigation District	Average	Fair
Bear Creek	Fair	Fair
Beaver Creek	Fair	Fair
Camp Creek	Fair	Fair
Central Ore. Irrig. Dist.	Average	Fair
Crooked River	Average	Fair
Deschutes River	Average	Average
Hay-Trout Creeks	Fair	Fair
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Fair	Fair
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Fair	Fair
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrigation Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Fair
Swalley Ditch	Excellent	Excellent
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. MASHINGTON ST.
PORTLAND, OREGON 97205

TREAMFLOW FORECASTS		THIS YEAR	PAST RECORD			
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
Crane Prairie Reservoir total Inflow	73	88	April-July	72	0.0	
	108	86	April-Sept.	_	83	
Crescent at Crescent Lake	18	82	April-July	110 <i>b</i> :	126 22	
	23	82	April-Sept.	<i>b</i> ;	28	
Crooked near Post	96	97	April-July	о b	99	
	97	96	April-Sept.	b	101	
Deschutes at Benham Falls d	300	76	April-July	336	393	
	470	79	April-Sept.	514	596	
Deschutes below Snow Creek	50	76	April-Sept.	55	66	
Deschutes, Little near Lapined	56	67	April-July	79	83	
0.1 P	67	70	April-Sept.	84	95	
Ochoco Reservoir net Inflow	16.0	70	April-Sept.	'b ₁	23	
Odell near Crescent	25	83	April-Sept.	27	30	
Squaw near Sisters Tumalo near Bend d'	47	92	April-Sept.	52	51	
Iumalo hear Bend 4	45	92	April-Sept.	43	49	

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

				WESTIAAN SIONWOF (ilououilu i	10. 1 (.)	LIND OF I	ONTH
FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value i	RESERVOIR	Usable Capacity	U This Year	sable Stora Last Year	ge Average i
Deschutes at Bend Little Deschutes near La Pine Crane Prairie net Inflow	1500 400 200 300	June 2 May 22 June 14 July 6	July 1 June 7 July 8 July 15	Crane Prairie Crescent Lake Ochoco Prineville Wickiup	55.3 86.9 47.5 153.0 200.0	45.9 42.9 45.0 148.1 185.5	30.1 31.4 18.8 120.8 158.5	47.6 49.9 33.2 115.8 194.4

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

				(COMPARISON WITH PREVIOUS YEARS)					
RIVER BASIN	Number of	THIS YEAR'S as PERC		RIVER BASIN and/or	Number of Courses		R'S SNOW PERCENT OF		
	Stations	Last Year	Average m	SUB-WATERSHED	Averaged	Last Year	Average i		
Crooked R., Upper Deschutes River	2	96	97	Crooked, Ochoco Deschutes abv. Wickiup Little Deschutes Tumalo & Squaw Creeks	3 4 3	47 76 60 72	74 83 72 80		

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as ofAPRIL 1, 1970

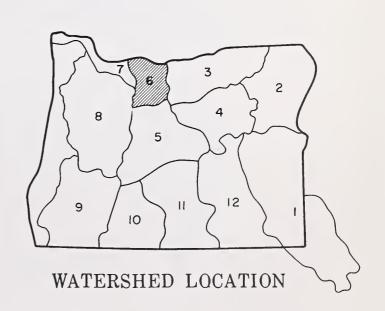
U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

WATER SUPPLIES WILL BE AVERAGE TO FAIR FOR THE HOOD RIVER-LOWER DESCHUTES WATER USERS THIS SUMMER. THE MOUNTAIN SNOWPACK FOR APRIL I WAS REDUCED TO 63 TO 77 PERCENT OF NORMAL FROM THE NEAR NORMAL AMOUNTS OF MARCH 1. THE MID AND LOWER ELEVATION SNOW WAS GREATLY REDUCED DURING MARCH. MARCH PRECIPITATION WAS 57 PERCENT OF NORMAL. MOUNTAIN SOILS ARE WELL WETTED AND ENSUING PRECIPITATION SHOULD PRODUCE GOOD RUNOFF. APRIL-SEPTEMBER FORECASTS FOR THE HOOD NEAR HOOD RIVER ARE 85 PERCENT OF NORMAL AND FOR THE WHITE RIVER BELOW TYGH VALLEY 83 PERCENT OF NORMAL. WASCO RESERVOIR HOLDS 173 PERCENT OF THE AVERAGE AMOUNT OF WATER FOR APRIL 1.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow F	Period
STREAM or AREA	Spring Season	Late Season
Aldridge Ditch (Tony Creek) Badger Creek Dee Irrigation District East Fork Irrig. Dist. Farmers Irrigation Dist. Hood River Irrig. Dist. Juniper Flat Middle Fork Irrig. Dist. Mile Creeks Mill Creek Mount Hood Irrig. Dist. Rock-Gate-Threemile Creeks Tygh Creek White River	Average	Average



REAMFLOW FORECASTS		THIS YEAR	3	PAST RECORD		
	FORE	FORECAST FO		THOUSAND A	CRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
Hood River near Hood River d	240	85	April-July	b	282	
Hood, West Fork near Dee	285 119 134	85 85 83	April-Sept. April-July	198 220	336 140	
White below Tygh Valley	105	82	April-Sept. April-July April-Sept.	b b	161 128 144	
	120		mprir septi		111	

FORECAST DATE of LOW FLOW VALUES

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

				MESERIOR STORAGE (TROUGHT			TO: TO: END OF MONTH		
FOR FOLKET POWE	Low Flow	Forecast Date Average	e Date		.0.0	Usable	Usable Storage		
FORECAST POINT	Value Second/Ft.	Recede to Low Of LOW	v Flow lue i	RESER	Capac		This Year	Last Year	Average i
Clear Branch Inflow	*33	July 15-31		Clear Lake	(Wasco)	11.9	6.8	3.2	4.0 m
*Average cfs forecast to flow for this two-week period.									

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

	, 			(COMPARISON WITH PREVIOUS Y	EARS)		
RIVER BASIN	Number of Stations	as PER	S MOISTURE CENT OF:	RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF
	Stations	Last Year	Average m	SUB-WATERSHED	Averaged	Last Year	Average 👣
Hood River, Mile Creeks	1	104		Hood River Mile Creeks White River	6 3 3	51 28 56	78 63 - 77

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



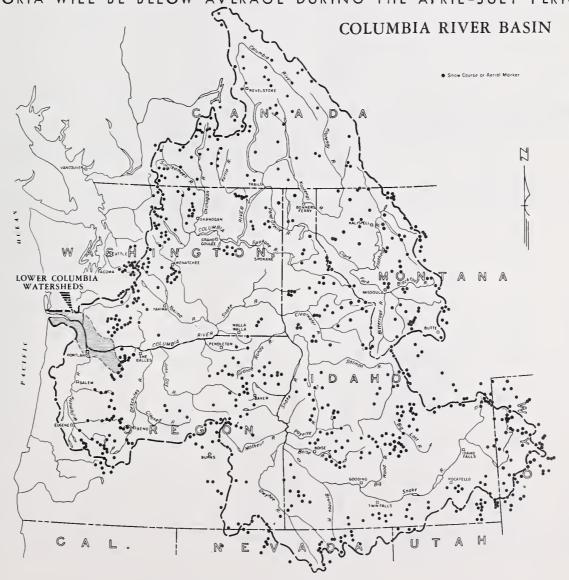
WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

*as of*APRIL 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

BELOW AVERAGE TO AVERAGE WATER SUPPLIES WILL BE AVAILABLE TO USERS IN THE LOWER COLUMBIA RIVER AREA. AN EXTREMELY POOR SNOW COVER EXISTS ON THE UPPER COLUMBIA IN CANADA. HERE APRIL 1 WATER CONTENTS EQUALED OR SET NEW RECORD MINIMUM AMOUNTS. BELOW NORMAL SNOW EXISTS IN WESTERN OREGON AND ON THE COWLITZ RIVER IN WASHINGTON. MOST OF THE REST OF THE BASIN HAS NEAR AVERAGE SNOW EXCEPT FOR THE EASTERN THIRD OF OREGON AND THE SOUTHERN TRIBUTARIES OF THE SNAKE, WHICH ARE ABOVE AVERAGE. MOST STREAMS IN THE COLUMBIA BASIN WILL FLOW IN THE 70-90 PERCENT OF AVERAGE RANGE THIS SUMMER. SOUTHERN IDAHO AND EASTERN OREGON WILL EXPERIENCE FLOWS AROUND 120 PERCENT OF NORMAL DURING THE SAME PERIOD. RIVER LEVELS ALONG THE LOWER COLUMBIA DOWN TO ASTORIA WILL BE BELOW AVERAGE DURING THE APRIL-JULY PERIOD.



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1218 S.W. WASHINGTON ST.
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SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or	Number of Courses		AR'S SNOW PERCENT OF
SUB-WATERSHED	Averaged	Last Year	Average i
Sandy River	2	61	80

STREAMFLOW FORECASTS		THIS YEAR	, PAST RECORD			
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Percent of Average		PERIOD	Last Year	Average i	
Columbia at The Dalles	75,000 90,000	8 3 86	April-June April-Sept.	<i>b</i> <i>b</i>	72,406 105,176	

HISTORICAL DATA (Columbia River at The Dalles)

V545	5	STREAMFLOW d (1,000 A.F.)	PEAK	
YEAR	YEAR APR SEPT.	APR. — JUNE MAY — JUNE		(1,000 c.f.s)	DATE
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	J une 5
1963.	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

		DRAINAGE DISTRICT PUMPHOUSE						
VANCOUVER	FLOW AT	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
GAGE (Weather Bu.)	THE DALLES				RIVER MILES			
(wedther Bu.)	(1,000 c.f.s)	118.9	96.0	91.0	77. 0	62.0	52.0	47. 0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

*as of*APRIL 1, 1970

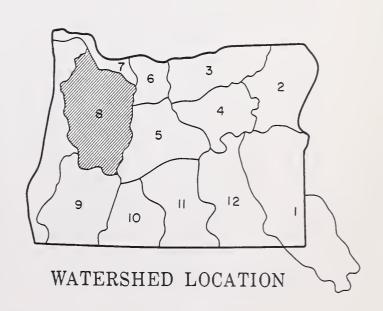
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GENERAL OUTLOOK

WATER USERS IN THE WILLAMETTE VALLEY WILL HAVE FAIR TO AVERAGE WATER SUPPLIES THIS SPRING AND SUMMER. THE APRIL 1 SNOWPACK ON THE UPPER CLACKAMAS AND McKENZIE RIVERS IS 48 PERCENT OF AVERAGE AND IS 63 PERCENT OF AVERAGE ON THE UPPER WILLAMETTE RIVER. RAINFALL DURING APRIL WAS 69 PERCENT OF AVERAGE. THE APRIL-SEPTEMBER FORECASTS RANGE FROM 69 PERCENT OF AVERAGE ON THE NORTH SANTIAM TO 85 PERCENT OF AVERAGE ON THE McKENZIE RIVER NEAR VIDA. THE MULTIPURPOSE RESERVOIRS ARE HOLDING NORMAL TO ABOVE NORMAL AMOUNTS OF WATER ON APRIL 1. THE MIDDLE FORK OF THE WILLAMETTE RIVER FLOWED 92 PERCENT OF NORMAL DURING APRIL.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow Period			
STREAM or AREA	Spring Season	Late Season		
Calapooya	Fair	Fair		
Clackamas	Fair	Fair		
McKenzie	Fair	Fair		
Molalla	Fair	Fair		
Santiam, North	Fair	Fair		
Santiam, South	Fair	Fair		
Willamette, Coast Fork	Fair	Fair		
Willamette, Middle Fork	Average	Fair		
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Report prepared by

T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

TREAMFLOW FORECASTS		THIS YEAR	PAST RECORD			
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
				_		
Clackamas at Big Bottom	105	78	April-July	<i>b</i>	134	
	130	78	April-Sept.	<i>b</i>	166	
Clackamas at Estacada	490	71	April-July	b	689	
	600	75	April-Sept.	<i>b</i>	800	
Clackamas above Three Lynx	374	72	April-July	b	517	
	465	76.	April-Sept.	Ь	610	
McKenzie at McKenzie Bridge	365	78	April-July	b	465	
	457	74	April-Sept.	Ь	614	
McKenzie near Vida	927	85	April-July	Ь	1087	
	1134	85	April-Sept.	Ь	1321	
Oak Grove Fork above Power Intake	96	77	April-July	Ь	125	
	126	77	April-Sept.	ь	163	
Row near Dorena	75	71	April-July	b	106	
G-11 N 12 1 N 2	80	73	April-Sept.	b	110	
Santiam, North at Mehama d	523	65	April-July	· <i>b</i>	800	
	586	65	April-Sept.	b	901	
Santiam, South at Waterloo	411	69	April-July	b	596	
Manager Manage	426	67	April-Sept.	b	633	
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge d	530	73	April-July	855	725	
Willamette at Salem d	630	76	April-Sept.	968	828	
willamette at Salem "	3620	77	April-July	$_{i}b$	4696	
	4130	79	April-Sept.	'b	5199	

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RESERVOIR	STORAGE	(Thousand	Ac.	Ft.)	END OF MONTH
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RIVER BASIN	Number of	THIS YEAR'S SNOW WATER AS PERCENT OF		DESERVOIR	Usable	Us	sable Stora	ge
and/or SUB-WATERSHED	Courses Averaged	Last Year	Average i	RESERVOIR	Capacity	This Year	Last Year	Average i
Clackamas River McKenzie River Row River Santiam River Willamette, Mid. Fk.	2 3 2 4 5	27 31 28 32 53	48 48 43 45 63	Cottage Grove Cougar Detroit Dorena Fall Creek Fern Ridge Foster Green Peter Hills Creek Lookout Point Timothy Lake *Multiple purpose reservoir—space reserved primarily for flood runoff.	30.0* 155.2* 299.9* 70.5* 115.0* 94.2* 30.0* 270.0* 200.0* 337.2* 61.7	15.7 90.6 216.7 40.2 73.9 68.2 14.9 183.1 153.2 198.8 61.5	15.1 52.5 60.3 30.9 72.7 68.9 14.0 138.0 62.1 96.3 42.0	17.2 170.1 38.6 68.8 120.3 195.6 49.4

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as ofAPRIL 1, 1970

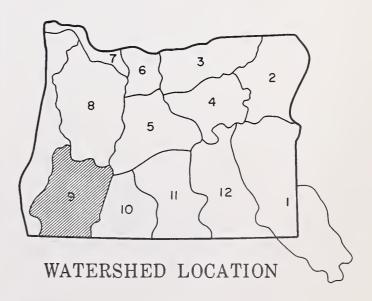
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OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

ONLY FAIR SUPPLIES ARE IN PROSPECT FOR WATER USERS DEPENDENT ON DIRECT DIVERSION IN THE ROGUE AND UMPQUA BASINS THIS SUMMER. SUPPLIES ARE AVERAGE FOR THOSE WITH STORED WATER. ALL RESERVOIRS ARE FULL EXCEPT FISH AND FOURMILE LAKES AND THEY WILL ALMOST FILL TO CAPACITY. SNOW-COVER RANGES FROM 21 PERCENT AT LOWER ELEVATIONS TO 77 PERCENT AT THE HIGHER ELEVATIONS IN THE SISKIYOUS AND CASCADES. PRECIPITATION FOR MARCH WAS 69 PERCENT OF AVERAGE. MOUNTAIN SOILS ARE SATURATED AND STREAMS WILL SHOW GOOD RESPONSE TO SPRING PRECIPITATION. LATE SUMMER STREAMFLOW WILL BE 60 TO 70 PERCENT ON STREAMS WITH LOWER ELEVATION WATERSHEDS AND 80 TO 90 PERCENT ON STREAMS FED FROM HIGH ELEVATION SNOW. THE UMPQUA AT ELKTON AND THE ROGUE AT RAYGOLD FLOWED 72 AND 95 PERCENT OF NORMAL RESPECTIVELY DURING MARCH.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

WATEN SOITE OF CONT. CONT.	Flow P	Flow Period			
STREAM or AREA	Spring Season	Late Season			
Althouse Creek	Fair Fair	Fair Fair			
Applegate River, Big Applegate River, Little Ashland Creek	Fair Average	Fair Average			
Butte Creek, Big	Fair Fair	Fair Fair			
Butte Creek, Little Cow Creek	Fair	Fair			
Deer Creek Elk Creek	Fair Fair	Fair Fair			
Emigrant Creek (abv. Res.) Evans Creek	Fair Fair	Fair Fair			
Gold Hill Irrigation Dist. Grants Pass Irrig. Dist.	Average Average	Fair Fair			
Grave Creek Illinois River, East Fork	Fair Fair	Fair Fair			
Illinois River, West Fork Jump-off-Joe Creek	Fair Fair	Fair Fair			
Neil Creek Red Blanket Creek	Average Average	Average Fair			
Rogue River Sucker Creek Table Park Innia Diet	Average Fair	Fair Fair			
Table Rock Irrig. Dist. Thompson Creek	Average Fair	Fair Fair			
Wagner Creek Williams Creek	Average Fair	Average Fair			



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1218 S.W. WASHINGTON ST. PORTLAND, OREGON 97205

TREAMFLOW FORECASTS		THIS YEAR	PAST RECORD			
	FORE	CAST	FORECAST	THOUSAND ACRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
				-		
Applegate near Copper	108	77	April-Sept.	ь	140	
Clearwater above Trap Creek ^d	63	86	April-Sept.	ь	73	
Fourmile Lake net Inflow	3.4	83	April-Sept.	b	4.1	
Hyatt Reservoir net Inflow d	3.2	62	April-Sept.	ь	5.2	
Illinois River near Kerby	157	77	April-July	b ,	205	
d	162	77	April-Sept.	ь	211	
Little Butte, N. Fk. at Fish Lk. nr. Lake Cr.	9.5	66	April-Sept.	ь	14.4	
Little Butte, So. Fk. nr. Lake Creek	22	67	April-July	b	33	
Rogue above Prospect	226	84	April-July	b	269	
d	287	88	April-Sept.	ь	326	
Rogue, South Fork near Prospect	54	87	April-July	ь	62	
	65	88	April-Sept.	Ь	74	
Rogue River below South Fork	475	83	April-July	Ь	570	
	588	83	April-Sept.	ь	708	
Rogue at Raygold near Central Point	630	81	April-July	853	781	
	765	81	April-Sept.	1003	941	
Rogue at Grants Pass	780	83	April-Sept.	b	940	
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls	156	88	April-Sept.	ь	176	

FORECAST DATE of LOW FLOW VALUES

RESERVOIR	STORAGE	(Thousand	Ac.	Ft.)	END OF MONTH
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FORECAST POWT	Low Flow Value		Average Date	RESERVOIR	Usable	·	Jsable Stor	rage
FORECAST POINT	Second/Ft.	Recede to Low Flow Value	of Low Flow Value i	RESERVOIR	Capacity	This Year	Last Year	Average i
Rogue at Raygold Little Butte Creek, South Fork	1200	July 29 May 1	Aug. 7 May 27	Emigrant Lake* Fish Lake Fourmile Lake Howard Prairie Hyatt Prairie *Average for years of record (in base period) after reconstruction.	39.0 7.8 16.1 60.0 16.1	39.0 6.0 11.8 60.6 16.1	38.1 3.4 5.7 23.5	6.0 10.6 32.7
	ŀ			SUMMARY of SNOW ME (COMPARISON WITH PREVIOUS		NTS		
				RIVER BASIN and/or SUB-WATERSHED	Number Cours Averag	es W		R'S SNOW ERCENT OF Average i'
				Applegate River Bear Creek Butte Creek Illinois River North Umpqua Rogue River	3 1 4 3 3 6		48 0 11 15 30 50	77 0 21 35 40 68

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

*as of*APRIL 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

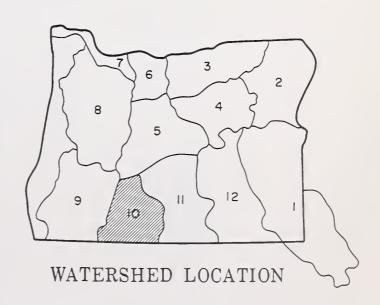
WATER SUPPLIES FOR KLAMATH COUNTY USERS WILL BE FAIR FOR THOSE DEPEND-ING ON DIRECT DIVERSION, AND EXCELLENT FOR THOSE WITH ACCESS TO STORED WATER. THE SNOWPACK IS 50 TO 60 PERCENT OF AVERAGE AT LOW AND MEDIAN ELEVATIONS AND 70 TO 80 PERCENT OF AVERAGE AT HIGHER ELEVATIONS.

NATURAL STREAMFLOW FOR THE APRIL-SEPTEMBER PERIOD WILL RANGE FROM 68 ON THE GERBER INFLOW TO 81 PERCENT ON THE UPPER KLAMATH INFLOW.

RESERVOIRS HOLD 164 PERCENT OF AVERAGE AMOUNTS. SOILS ARE SATURATED AND SUBSEQUENT PRECIPITATION SHOULD PRODUCE GOOD RUNOFF. PRECIPITATION DURING THE MONTH WAS 66 PERCENT OF AVERAGE. THE UPPER KLAMATH MARCH INFLOW WAS 110 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow Pe	eriod
STREAM or AREA	Spring Season	Late Season
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River	Average Excellent Excellent Fair Excellent Fair	Average Average Average Fair Average Fair



Report prepared by

T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

REAMFLOW FORECASTS		THIS YEAR			PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET		
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average 1		
Clear Lake Reservoir Inflow k	26	70	April-June	ь	37		
	28	70	April-Sept.	b	40		
Gerber Reservoir Inflow k	12.8	68	April-June	ь	18.8		
	13.2	68	April-Sept.	b	19.5		
Sprague near Chiloquin	184	70	April-July	b	263		
	210	71	April-Sept.	b	296		
Jpper Klamath Lake net Inflow ^k	384	80	April-July	5 98	467		
	465	81	April-Sept.	655	575		
Williamson below Sprague River	367	77	April-Sept.	ь	475		

SOIL MOISTURE

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

OUL MUISTONE				RESERVUIR STURAGE (1)	nousand	AC. IT.)	END OF	НТИОМ
RIVER BASIN	Number of	THIS YEAR'S	MOISTURE	DESERVOIR	Usable	Ü	sable Stor	age
TOTAL BASIN	Stations	Last Year	Average M	RESERVOIR	Capacity	This Year	Last Year	Average
Upper Klamath	1	102	105	Clear Lake Gerber Upper Klamath Lake	440.2 94.0 584.0	375.3 92.7 503.9	47.8	250.4 56.6 467.4
				SUMMARY OF SNOW ME (COMPARISON WITH PREVIOUS RIVER BASIN and/or	ASUREM YEARS) Numbe Cours Avera	r of WA	THIS YEAR TER AS PE	
				SUB-WATERSHED	Aveia	Las	st Year	Average
				Lost River Sprague River Upper Klamath River Williamson River	4 3 8 3		37 40 38 39	77 66 56 55

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

*as of*APRIL 1, 1970

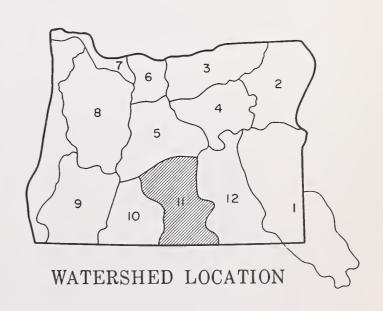
U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

SUMMER WATER SUPPLIES IN LAKE COUNTY WILL BE FAIR TO AVERAGE FOR USERS DEPENDENT ON DIRECT DIVERSION AND EXCELLENT FOR THOSE WITH ACCESS TO STORED WATER. ALL LOW SNOW IS GONE AND THE SNOWPACK AT HIGHER ELEVATIONS RANGES FROM 42 PERCENT TO 74 PERCENT. PRECIPITATION WAS 83 PERCENT OF NORMAL DURING MARCH. STREAMFLOW FOR THE APRIL TO SEPTEMBER PERIOD WILL RANGE FROM 51 PERCENT OF AVERAGE TO 82 PERCENT OF AVERAGE. SOIL MOISTURE IS NEAR FIELD CAPACITY. MAJOR RESERVOIRS IN THE AREA ARE FULL.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	eriod
STREAM or AREA	Spring Season	Late Season
Chewaucan Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Assn. Rock Creek (Hart Mtn.) Silver-Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes	Average Average Fair Fair Fair Fair Excellent Fair Fair Fair Fair Fair Fair Fair Fair	Fair Fair Fair Fair Fair Fair Average Fair Fair Fair Fair Fair Fair Fair



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST. PORTLANO, OREGON 9720S

	THIS YEAR	3	PAST RECORD		
FORE	CAST	FORECAST	THOUSAND A	CRE FEET	
Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i	
65	82	April-July	b	79	
69	82		b *	84	
51	80		b	64	
52	80	April-Sept.	b	65	
19.0	64	April-July	b	30	
19.0	34	April-Sept.	b	30	
12.7	80	April-July	b	15.9	
13.0	80	April-Sept.	b	16.1	
8.5	46	April-July	b	18.6	
10.2	51	April-Sept.	b	20	
10.5	62	April-July	b	16.8	
10.6	62	April-Sept.	b	17.2	
	Thousand Acre Feet 65 69 51 52 19.0 19.0 12.7 13.0 8.5 10.2 10.5	FORECAST Thousand Acre Feet Percent of Average 65 82 69 82 51 80 52 80 19.0 64 19.0 34 12.7 80 13.0 80 8.5 46 10.2 51 10.5 62	Thousand Acre Feet	FORECAST	

SOIL MOISTURE

RESERVOIR	STORAGE	(Thousand	Ac.	Ft.)	END OF MONTH
-----------	---------	-----------	-----	------	--------------

RIVER BASIN	Number		S MOISTURE CENT OF:	RESERVOIR	Usable		Usable Sto	
MYEN BASIN	Stations	Last Year	Average. m	RESERVOIR	Capacity	This Year	Last Year	Average i
Chewaucan, Silver Creek, Drew Creek Honey, Deep, 20-Mile Crs.	1	120 	138 110	Cottonwood* Drews Thompson Valley *Average for years of record (in base period) after reconstruction.	8.7 63.0 19.5	8.7 63.4 b	3.4 39.4 	44.6
				SUMMARY of SNOW ME (COMPARISON WITH PREVIOUS RIVER BASIN and/or SUB-WATERSHED Chewaucan River Deep Creek	Number Cours Avera	r of W	ATER AS Fast Year 40 36	R'S SNOW PERCENT OF Average i' 72 66
				Drew Creek Honey Creek Silver Creek Twenty Mile Creek	3 3 3		12 42 0 41	25 74 0 42

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1553-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

*as of*APRIL 1, 1970

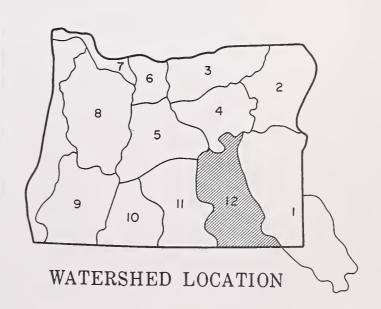
U. S. D. A. SOIL CONSERVATION SERVICE OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

WATER USERS IN THE HARNEY BASIN WILL HAVE AVERAGE TO FAIR WATER SUPPLIES FROM STREAMS DRAINING THE STEENS MOUNTAIN AREA, AND AVERAGE TO EXCELLENT SUPPLIES FROM STREAMS DRAINING THE BLUE MOUNTAIN AREA. THE HIGH ELEVATION SNOWPACK IS 110 TO 127 PERCENT OF NORMAL AND MEDIAN ELEVATION SNOW IS 90 TO 100 PERCENT OF NORMAL. LOW ELEVATIONS ARE BARE. THE APRIL THROUGH SEPTEMBER STREAMFLOW IN THE NORTHERN PART OF THE COUNTY WILL FLOW 107 TO 126 PERCENT OF NORMAL AND 80 TO 107 PERCENT FOR THOSE HEADING IN THE "HIGH" COUNTRY OF THE STEENS. DESERT STREAMS DRAINING LOWER ELEVATIONS WILL HAVE ONLY FAIR LATE SEASON WATER. MARCH RAINFALL WAS 85 PERCENT OF AVERAGE FOR THE AREA. WATERSHED SOILS ARE SATURATED AND SPRING RAINFALL SHOULD PRODUCE GOOD RUNOFF.

WATER SUPPLY OUTLOOK Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

	Flow P	eriod
STREAM or AREA	Spring Season	Late Season
Catlow Valley Cow Creek Donner und Blitzen River Mill-Coffeepot Creeks Rattlesnake Creek Silver Creek Silvies River Soldier-Prather Creek Trout Creek Whitehorse Creek	Average Excellent Average Excellent Excellent Excellent Excellent Excellent Average Average	Fair Average Average Average Average Average Average Average Average Average



T.A. GEORGE AND H.M. VANCE

U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.

PORTLAND, OREGON 97205

STREAMFLOW FORECASTS		THIS YEAR	,	PAST F	RECORD
	FORE	CAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average i
Donner und Blitzen near Frenchglen	55 59	108 107	April-July April-Sept.	79 84	51 55
Silver near Riley	19.0	107	April-July	27	17.9
Silvies near Burns	103	127	April-July	83	81
Trout near Denio	105 5.7 6.0	126 80 80	April-Sept. April-July April-Sept.	84 12.5 13.0	83 7.1 7.5

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of	THIS YEAR'S	MOISTURE ENT OF:	RIVER BASIN	Number of Courses	THIS YE WATER AS	AR'S SNOW PERCENT OF
	Stations	Last Year	Average m	SUB-WATERSHED	Averaged	Last Year	Average 'i
RIVER BASIN Silvies River, Silver Cr. Trout Cr., Donner und Blitzen	of	THIS YEAR'S as PERCI		and/or	Number of Courses Averaged 4 3 4 3	WATER AS	PERCENT OF

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

DANNAGE BASN merée NOW COURSE 5 5 5 5 5 5 5 5 5	NOW (ТН	IIS YE.	AR	PAST	REC.	SNOW	TI	HIS YE	AR	PAST	REC
OMMRES, MAINEUE WATERCHIDS Antelope Ridge Safie Creek (Ida.) Signed (Sev.) Signed (Se	AINAGE BASIN and/or SNOW COURSE	of	Depth	Cont.	(inc	hes)	DRAINAGE BASIN and/or SNOW COURS				Water ((inch Last	
Anteloge Ridge Battle Creek (Nev.) \$\frac{1}{3}\text{ first Creek (Nev.)} \$\frac{1}{3}\text{ first first First Creek (Nev.)} \$\frac{1}{3}\text{ first first First Creek (Nev.)} \$\frac{1}{3}\text{ first first First First Creek (Nev.)} \$\frac{1}{3} first Fir					Yr.	Avet	BURNT. POWDER. PIN	T			Yr.	Ave
Battle Greek (Mex.) 3/20 0 0.0 6.8 2.08 Aneroid Lake #1					16.3	$\begin{vmatrix} & 1 \\ 4.0^h \end{vmatrix}$	TMNAHA WAT			I	1	
Blue Mountain Springs 3/26 52 12 15 15 15 15 15 15	Battle Creek (Ida.)			0.0	6.8	2.0,7	Aneroid Lake #1					
Blue Mountain Springs							The state of the s					
Back Pasture c										1		
Buckskin, Lower (Nev.)												
Bully Creek f	Buckskin, Lower (Nev.)								64	21.0	26.3	23
Bally Creek * 9/27 0 0.0 5.3 0.78 county Line 3/31 10 3.4 5 Coll Meadows 3/27 3 30 10.7 30 Collwhola Basin * (Nev.) 3/27 19 6.3 19.2 Cottonwood-Indian * 3/27 0.0 0												
Call Meadow * 0												
Calumbia Basin (Nev.) 3/27 19 6.3 19.2 Cattenwood-Indian 3/27 0 0.0 1.0 1.0 1.6 Cattenwood-Indian 3/27 0 0.0 2.0 1.0 1.6 Carox Campe (Nev.) 3/25 33 12.4 10.8 8.7 Disaster Peak (Nev.) 3/25 25 10.5 28.7 9.5 Elicardad Pass 3/31 0 0.0 7.6 8.6 Cattenwood-Rever (Nev.) 3/31 0 0.0 7.6 8.6 Elidardad Pass 3/31 17 7.0 8.7 Elidardad Pass 3/31 37 5 29.2 32.2 20.2 Elicardad Pass 3/31 37 5 29.2 32.2 20.0 Elicardad Pass 3/31 37 5 29.3 32.2 20.0 Elicardad Pass 3/31 37 27 20.0 Elicardad Pass 3/31 37 5 29.3 32.2 20.0 Elicardad Pass 3/31 37 5 29.3 32.2 20.0 Elicardad Pass 3/31 37 5 29.3 32.2 20.0 Elicardad Pass 3/31 37 21.2 3.0 Elicardad Pass 3/31 37 27 20.0 Elicardad Pass 3/31 37 27 20.0 Elicardad Pass 3/31 37 21.2 3.2 Elicardad Pass 3/31 37 21.2 3.2 Elicardad Pass 3/32 34 22.5 20.0 Elicardad Pass 3/32 34 22.5 20.0 Elicardad Pass 3/32 34 21.2 3.2 Elicardad Pass 3/32 34 22.5 20.0 Elicardad Pass 3/32 34 20.0 Elicardad Pass 3/32									1			
Cottonwood-Indiane						1 T						
Crow Campe												
Disaster Peak (Nev.)			33	12.4				3/30				12
Eldorado Pass			-									
Fawn Creek (Nev.) Flag Prairie												114
Fish Creek (Nev.) 3/30 75 29. 2 32. 2 25. 0 Meacham 3/24 10 3.7 13 13 89 Meacham Mirror Lake 6 3/24 10 3.7 13 13 89 Meacham Mirror Lake 6 3/21 214 85.8 61 62 63 63 63 63 63 63 63			0	0.0		5 i					8.0	
Flag Prairie* Flag Prairie* Flox Creek (Nev.) Fl		-	75	29.2								
Fry Canyon (Nev.) 3/30 25 8.5 11.9 6.3 Cold Creek (Nev.) 3/20 20 7.0 8.0 4.7 Fower Plant 3/27 8.3.4 6.5 Fower Plant 3/28 8.3.4 3.2 7.5 Fower Plant 3/27 8.3 3/21 10 4.0 7.2 7.												
Gald Creek (Nev.) 3/30 20 7.0 8.0 4.7												
Granite Peak (Nev.)												
Hyde Pasture									1			
Jack Creek, Lower (Nev.) 3/31 0 0 0 0 5 2 8 8 5 5 8 10.5 12.4 9.8 Jack Creek (New Tangent) 6 0 0 0 0 0 0 0 0 Lake Creek (New Tangent) 3/26 37 13.8 14.2 10.0 9.7 Lawerl Draw (Nev.) 3/27 2 8.4 6.8 5.4 Logan Valley 1 1 2 1 1 1 1 1 1 1									l l		3.9	
Jack Creek, Upper (Nev.)						• 1		1 '	_	1		
Lake Creek (New Tangent) 3/26 37 13.8 Tollgate 3/26 70 29.7 32 Laurel Draw (Nev.) 3/27 3 Logan Valley* 3/27 0 0.0 0.0 0.0 Louse Canyon * 3/27 1	· · · · · · · · · · · · · · · · · · ·	3/27	36	10.5								
Lake Creek (New Tangent) 3/26 37 13.8 3 - 3 - 3 - 1												
Laurel Draw (Nev.) 3/27 21 8.4 8 - 7.2 h Logan Valley 6 3/27 0 0.0 0.0 Tm Louse Canyon 6 3/27 1			1					1				
Logan Valley							TV Ridge c	3/31	65	24.7	21.7	-
Lookeut Butte c						5.4 ^m			<u>.</u>			
Martin Creek (Nev.) 3/25 26 9.8 22.5 8.2 Merritt Mountain (Nev.) 3/27 13 4.3 14.8 Battle Mountain Summit 3/25 30 11.4 12 Merritt Mountain (Nev.) 3/27 10 4.0 17.8 1.6 h	-		1			T_{r}^{m}					CK	
Merritt Mountain (Nev.) 3/27 13 4.3 14.8 Battle Mountain Summit 3/24 T T 4 Midas (Nev.) 3/27 0 0.0 17.8 1.6 Blue Mountain Camp 3/26 33 14.4 20 Mud Flat (Ida.) 4/1 11 4.9 12.6 4.2 4.4 Blue Mountain Camp 3/26 33 14.4 20 Mountain Right 3/24 10 3/27 10 4.0 12.2 4.4 Lucky Strike 3/27 41 13.4 15 Meacham 3/24 10 3.7 13 Meacham 3/26 0 0.0 0 Meacham 3/26 0 0 0 Meacham 3/26 0 0.0 0 Meacham 3/26 0 0 0 0 Meacham 3/26 0 0								1	1		1	
Midas (Nev.) Mud Flat (Ida.) Mud Flat												
Mud Flat (Ida.)					1	$\begin{vmatrix} - & -1 \\ 3 & ch \end{vmatrix}$	Battle Mountain Summit		T			
Oregon Canyon (Nev.) 3/27 0 0.0 4.0 12.2 4.4 h			9			$\int_{4}^{1.0} h$	Fmigrant Springs					
Quinn Ridge* (Nev.) 3/27 0 0 0.0 4.1 0.7						4.4h	Lucky Strike					
Rock Spring 3/30 12 3.9 4.8 4.2 8.7 5.8 5.8 76 Creek (Nev.) 3/30 21 6.7 8.9 5.8 15.4 18.2 10.9 h Silver City (Ida.) 3/27 45 15.4 18.2 10.9 h Silver City (Ida.) 3/27 37 15.0 21.7 10.9 Stag Mountain (Ida.) 3/27 8 2.6 13.9 Stuccor Creek (Ida.) 3/27 10 3.9 9.1 4.9 m Succor Creek (Ida.) 3/27 10 3.9 9.1 4.9 m Succor Creek (Ida.) 3/27 10 3.9 9.1 4.9 m Silver City (Ida.) 3/27 10 3.9 9.1 4.9 m Silver Creek (Nev.) 3/27 10 3.7 0.0 0.0 3.7 0.0 0.0 3.7 0.0			1			0.7 ^h	Meacham				13.3	8
Rodeo Flat (Nev.) 3/30 21 6.7 8.9 5.8 10.9												
76 Creek (Nev.) Silver City (Ida.) Silver City (Ida.) Silver City (Ida.) Silves 3/30 3/27 3/30 3/27 3/30 3/27 3/30 3/27 3/30 3/27 3/30 3/27 3/30 3/27 3/30 3/27 3/30 3/27 3/30 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/31 5.0 3/27 3/27 3/31 5.0 3/27 3/27 3/27 3/27 3/27 3/27 3/27 3/27										1		
Silver City (Ida.) Silvies 3/30 32 12.8 23.2 12.3 South Mountain (Ida.) Stag Mountain **(Nev.) Stag Mountain **(Nev.) Stinking Water Succor Creek** (Ida.) Taylor Canyon (Nev.) 3/27 10 3.9 9.1 4.9 To Jame** (Nev.) 3/27 10 3.9 9.1 4.9 Tremewan Ranch (Nev.) 3/27 0 0.0 10.4 2.9 Triangle** (Ida.) Trout Creek** 3/27 10 3.9 7.0 0.0 0.4 Trout Creek** 3/27 10 3.9 7.0 0.0 0.4 Trout Creek** 3/27 12 4.8 16.7 3.8 Tought Ranch** (Ida.) 3/27 12 4.8 16.7 3.8 Vaught R					1 8 9		weston Mountain	3/26	0	0.0	0.0	0
South Mountain (Ida.) 3/27 37 15.0 21.7 10.9	Silver City (Ida.)	4/3	39	15.0	22.7	14.4h	UPPER JOHN DAY	WATER	' SHED I	S		
Stag Mountain e							Anthony Lake	3/31	97	33.4	26.5	27
Succor Creek (Ida.) 3/27 10 3.9 9.1 4.9 Beech Creek Summit 3/30 3 2.0 7 7 19 6.3 19.2 8 19.2 19 8.0 19.2 7 19 6.3 3/27 0 0.0 0.0 0.4 8 19.2 19 8.0 12.5 7.9 8 19.1 19.1 19.1 19.1 19.1 19.1 19.1								3/25	30	11.4	12.0	11
Taylor Canyon (Nev.) Toe Jam e (Nev.) Tremewan Ranch (Nev.) Triangle (Ida.) Trout Creek e 3/27	-		_								4.8	1
Toe Jam * (Nev.) Tremewan Ranch (Nev.) 3/27 0 0.0 3.7 0.0 Derr Triangle* (Ida.) 3/27 0 0.0 0.0 0.0 0.4 Derr Trout Creek * 3/27 20 8.0 12.5 7.9 Gold Center 3/30 43 15.9 14 3/37 75 29.3 - Vaught Ranch* (Ida.) War Eagle* (Ida.) 3/27 67 26.1 25.1 Lucky Strike Marks Creek Ochoco Meadows Olive Lake * 4/1 69 25.5 23 Schoolmarm Snow Mountain Starr Ridge Tipton 3/31 28 8.9 10 Blue Mountain Summit 3/31 28 8.9 10 Blue Mountain Summit 3/26 22 7.7 14 Schotland 3/26 22 7.7 14 15.9 14 15.9 14 15.9 14 15.9 14 15.9 14 15.9 14 15.9 14 15.9 15 15.9												
Tremewan Ranch (Nev.) 3/27 0 0.0 0.0 0.4 Derr Triangle (Ida.) 3/27 0 0.0 0.0 0.4 Gold Center 3/30 43 15.9 14 12 4.8 16.7 3.8 Indian Creek Butte 3/30 24 8.6 8 Yaught Ranch (Ida.) War Eagle (Ida.) 3/27 67 26.1 25.1 Warks Creek Ochoco Meadows Ochoco Meadow											10.5	
Trout Creek e 3/27 20 8.0 12.5 7.9 d Gold Center 3/30 43 15.9 14 15.9						0.0	Derr				14.4	9
"V" Lake e			_									9
Vaught Ranch (Ida.) War Eagle (Ida.) 3/27 T T 26.1 25.1 Izee Summit Lucky Strike Marks Creek					1							12
War Eagle (Ida.) 3/27 67 26.1 25.1 Lucky Strike Marks Creek Ochoco Meadows Olive Lake 4/1 69 25.5 23 Schoolmarm Snow Mountain Starr Ridge Tipton 3/27 41 13.4 15 0.0 0.0 6 0.0 0.0 6 0.0 0.0 6 0.0 0.0 6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0				1								
Marks Creek 3/25 0 0.0 6 Ochoco Meadows 3/31 22 7.5 11 Olive Lake 6 4/1 69 25.5 23 Schoolmarm 3/31 6 1.5 3 Snow Mountain 3/26 40 14.4 16 Starr Ridge 3/30 14 5.4 7 Tipton 3/31 35 12.1 11											8.4	7
Ochoco Meadows 3/31 22 7.5 11 Olive Lake e 4/1 69 25.5 23 Schoolmarm 3/31 6 1.5 3 Snow Mountain 3/26 40 14.4 16 Starr Ridge 3/30 14 5.4 7 Tipton 3/31 35 12.1 11	.a. bagic (raa.)	-, _,			20.1					0.0	6.4	1
Schoolmarm 3/31 6 1.5 3 3/26 40 14.4 16 16 16 16 17 16 17 17							Ochoco Meadows	3/31		7.5	11.6	9
Snow Mountain 3/26 40 14.4 16												
Starr Ridge 3/30 14 5.4 7 Tipton 3/31 35 12.1 11							•					4
Tipton 3/31 35 12.1 11												12
										1	T	-

SNOW	TH	IIS YE	AR	PAST	REC.	SNOW	TH	HIS YE	AR	PAST	REC.
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont (In.)	Water (included) Last	Content nes) Ave. i	DRAINAGE BASIN and/or SNOW COURSE		Snow Depth (In.)	Water Cont. (In.)	Water C (inch Last Yr.	
UPPER DESCHUTES, CRO	OOKED	WATE	RSHEI	r S		WILLAMETTE WATERSH	EDS (Conti	nued		
Black Pine Spring Caldwell Ranch Cascade Summit Chemult Deer Creek Derr Hogg Pass Hungry Flat Irish-Taylor Marks Creek Mowich New Crescent Lake New Dutchman Flat #2 Ochoco Meadows Snow Mountain Tamarack Tangent Three Creek Butte Three Creek Meadow	4/1 3/31 3/30 3/31 3/31 3/26 3/30 4/1 3/31 3/25 3/24 4/1 3/31 3/26 3/27 4/1 4/1	0 8 54 55 35 22 76 0 78 0 2 29 96 22 40 5 12 39	0.0 3.6 20.6 2.6 13.3 7.7 32.0 0.0 30.6 0.0 0.8 12.4 43.9 7.5 14.4 2.2 17.9 4.4 15.5	8.3 13.1 35.2 10.8 22.9 14.4 49.7 7.9 45.9 6.4 9.5 20.1 50.4 11.6 16.1 5.8 24.6 17.7 24.4	8.5 -9.5 43.4 3.1 38.4 1.7 2.6 14.5 51.9 9.3 12.9 4.1 22.0 9.6 19.0	McKenzie Bridge Meridian Dam Mill City Oakridge Peavine Ridge Phlox Point Railroad Overpass Salt Creek Falls Santiam Junction Still Creek Timothy Lake Valsetz Summit Vida Waldo Lake Weaver Creek White Branch Slide Whitewater Bridge	4/1 3/30 3/30 3/30 3/31 3/30 3/30 3/30 3/	0 0 0 0 22 117 0 10 12 42 0 53 0	0.0 0.0 0.0 8.6 52.8 0.0 2.5 4.4 17.3 0.0 0.0 21.9 0.0	0.0 0.0 0.0 32.3 ^g 73.2 T 24.3 31.3 41.6 28.5 0.0 38.4 2.6 23.0	62.5 1.3 17.4 23.1 25.0 13.2 0.0 32.4 0.6 4.9 1.8
Waldo Lake Willamette Pass	3/25 3/26			38.4 48.2		ROGUE, UMPQUA I	 WATERS 	 SHEDS 			
HOOD, MILE CREEKS, I WATERSHI Brooks Meadows Clear Lake Clear Lake (Experimental) Cooper Spur Cooper Spur (Alternate) Greenpoint Reservoir Knebal Springs Parkdale Phlox Point Red Hill Still Creek Switchback Tilly Jane Ulrich Ranch Junction Umbrella Falls Upper Valley WILLAMETTE W	3/27 3/30 3/30 3/30 3/38 3/27 c 3/30 3/31 3/30 3/30 3/29 3/27 4/1 c	17 16 30 15 30 39 10 117 76 42 28 86 4 134	7.9 5.9 11.4 5.6 12.7 16.9 5.0 52.8 33.8 17.3 11.3 35.8	22.7 21.3 28.0 20.5 25.7 31.0 16.2 0.0 73.2 66.5 41.6 26.8 53.4 11.4	$ \begin{bmatrix} 10.6 \\ 19.2 \\ \\ \\ 17.5 \\ 7.4 \\ \\ 62.5 \\ 43.7 \\ 25.0 \\ \\ 45.3 \\ 3.2 \\ \\ 45.3 \\ \\ \\ 45.3 \\ \\ \\ \\ 45.3 \\ \\$	Cold Springs Camp Deadwood Junction Diamond-Crater Summit Diamond-Crater Sum. (Alt.) Diamond Lake Fish Lake Fourmile Lake Grayback Peak Howard Prairie Hyatt Prairie Reservoir	3/30 3/30 3/31 3/25 3/30 3/30 4/1 3/24 3/31 3/23 3/23 3/23 3/30 3/24 3/31 3/26 3/26 3/26 3/26 3/26 3/26 3/26 3/26	100 T 67 27 80 34 69 0 70 64 40 T 46	43.1 T 29.7 11.5 34.3 14.7 28.6 0.0 28.2 25.7 16.6 T 21.0 14.3 0.0 0.0	48.1 36.9 46.2 41.1 46.4 18.9 43.0 27.4 26.8 34.9 47.9 16.4 19.0 21.8 17.7 1.5 0.0 0.0	12.4'30.9 21.1 30.2 33.6 8.7 37.7 22.8 12.8 25.2 7.6 7.2'
Cascade Summit Champion Clackamas Lake Clear Lake Clear Lake (Experimental) Dead Horse Grade Detroit (City) Detroit Dam Golden Curry Creek Hogg Pass Laurel Mountain Layng Creek Lost Creek Ranch Lund Park Marion Forks Mary's Peak Mary's Peak Mary's Peak (Alternate) McCredie Springs McKenzie (Continued)	3/30 4/1 3/30 3/30 3/30 4/1 3/30 3/31 4/1 4/1 4/1 3/30 3/30 3/30 3/30 4/1	54 34 14 16 30 7 0 0 76 0 0 0 0 0	14.7 6.3 5.9 11.4 2.3 0.0 0.0 32.0 0.0 0.0 0.0 0.0 0.0 0.0	26.1 21.3 28.0 33.3 0.0 0.0 10.6 49.7 0.0 11.6 0.0 24.3 41.6	30.2 12.3 10.6 19.2 19.8 0.0 0.0 4.1 43.4 0.0 13.0 14.2 0.0	Mt. Ashland Switchback Mule Creek North Umpqua Page Mountain Park Headquarters Red Butte #1 Red Butte #2 Red Butte #3 Red Butte #4 Red Butte #5 Red Butte #6 Seven Lakes #2 Seven Mile Silver Burn Siskiyou Summit Siskiyou Sum. (Alt. #2)	3/30 3/26 3/30 3/30 3/26 3/26 3/26 3/26 3/26 3/26 3/30 3/31 3/28 3/30 3/30 3/30 3/30	83 0 6 0 126 0 0 0 0 0 80 67 0 0 58 0	34.5 0.0 2.3 0.0 60.5 0.0 0.0 0.0 34.7 28.6 0.0 0.0 24.8 0.0	44.3 22.5 18.6 15.8 65.2 32.8 25.3 14.6 8.8 T	 13.6 4.3 58.6 16.2 9.3 7.5 3.4 0.0 0.0 42.3 12.0 2.5 0.4 10.5

SNOW	ТН	IIS YE	AR	PAST	REC.	SNOW	TI	HIS YE	AR	PAST	REC.
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Depth	Water Cont		Content hes)	DRAINAGE BASIN and/or SNOW COURSE		Snow Depth		Water C (inch	
VI AMAUTI LIAU			(111.)	Yr.	AVE	TAKE COLDIEN COOCE LAVE				Yr.	
Annie Spring Beatty (PP&L) Billie Creek Divide Bly Mountain Bly 101 Ranch (PP&L) Chemult Chiloquin (PP&L) Cold Springs Camp Crazyman Flate Crowder Flate (Calif.) Crystal (PP&L) Diamond-Crater Summit Diamond-Crater Sum. (Alt.) Diamond Lake Junction (97) Dog Hollowe Finley Corralse Fort Klamath (PP&L) Fourmile Lake Gerber Harriman (PP&L) Hyatt Prairie Reservoir Kirk (PP&L) Lake of the Woods Park Headquarters Pelican Guard Station Quartz Mountain Quartz Mtn. (Extension)	3/30 b 3/30 3/20 6 3/31 6 3/27 3/27 3/23 3/2	100 27 2 5 69 17 0 70 64 0 39 0 46 0 0 0 8 126 0 0	11.5 0.6 2.6 28.6 6.3 0.0 0.0 28.2 25.7 0.0 0.0 15.6 0.0 0.0 0.0 0.0 0.0 0.0	0.0 36.9 13.4 0.0 10.8 T 46.4 14.4 8.4 16.5 43.0 10.2 3.0 22.8 5.2 34.9 2.6 8.4 19.0 14.3 65.2 10.2 12.4 12.3	21.1 4.9h 0.2 ^m 8.5 T 33.6h 10.5 ^m 5.4h 37.7 - 4.8h 0.4 ^m 15.9 ^m 0.7 2.0 ^m 10.7 58.6 0.8 ^m 4.9	Quartz Mtn. (PP&L) Quartz Mountain Quartz Mtn. (Extension) Sherman Valley Silver Creek State Line State Line (Calif.) Strawberry Summer Rim Sycan Flat Willow Creek HARNEY BASIN Blue Mountain Springs Buck Pasture Buckskin Lake Call Meadows Crow Camp Delintment Lake Denio Creek Disaster Peak (Nev.) Emigrant Butte Fish Creek	3/27 3/27 DIS 3/27 3/27 3/31 3/27 3/27 3/27 3/27 3/27 3/27 3/27 3/27	0 50 CONT: 0 0 0 28 0 3 9 46 0 0 0 55 0 0 8 0 16 0 25 0 75	0.0 20.5 INUED 0.0 0.0 10.4 0.0 1.2 3.6 18.1 0.0 0.0 3.0 0.0 6.6 0.0 10.5 0.0 29.2	7.6 25.1 12.4 12.3 20.1 3.9 14.4 13.8 21.0 13.7 9.1 16.9 6.8 T 9.1 2.7 9.8 2.1 28.7 6.9 32.2	1.5 14.5 4.9 -11.6 1.2 8.3 6.0 18.0 5.3 3.2 15.5 2.2 0.0 0.8 6.8 0.0 9.5 1.8 25.0
Quartz Mtn. (Extension) Quartz Mtn. (PP&L) Seven Lakes #2 Seven Mile State Line (Calif.) Strawberry Summer Rim Sun Mountain Sycan Flat Taylor Butte LAKE COUNTY, GOOSE	DI 3/30 3/31 3/27 3/27 3/30 3/25 3/27 3/26	SCON 80 67 3 9 46 48 0 T	TINUE 34.7 28.6 1.2 3.6 18.1 19.5 0.0	53.0 14.4 13.8 21.0 31.3 13.7	42.3 8.3 m/3	Hart Mountain ^e Idlewild Camp Izee Summit Lake Creek R. S. Lake Cr. (New Tangent) Oregon Canyon ^e Rock Spring Silvies	3/31 3/27 3/30 3/26 3/27 3/30 3/30 3/30 3/31 3/27 3/27	0 7 24 38 37 10 12 32 40 14 0 20	0.0 2.7 8.6 14.2 13.8 4.0 3.9 12.8 14.4 5.4 0.0 8.0	6.9 5.5 8.4 10.0 12.2 4.8 23.2 16.1 7.2	0.9 4.0 7.2 9.7 4.4 4.2 12.3 12.9
Adin Mountain (Calif.) Bald Mountain (Nev.) Bear Flat Meadow ^e Camas Creek Cedar Pass (Calif.) Colvin Creek ^e Cox Flat ^e Crowder Flat ^e (Calif.) Dismal Swamp ^e (Calif.) Finley Corrals ^e Hart Mountain ^e Mt. Bidwell (Calif.) North Star (Calif.)	3/30 3/26 3/27 3/28 3/31 3/27 3/27 3/27 3/27 3/27 3/27 3/31 3/31	24 1 25 12 38 0 0 0 46 39 0 55	10.9 0.6 9.2 4.2 14.2 0.0 0.0 0.0 18.4 15.6	20.2 8.6 17.9 18.9 23.6 14.4 16.7 8.4 23.6 22.8 6.9	10.9 ^m 9.7 15.0 6.7 ^m 1.4 ^m 17.6 ^m 15.9 ^m						
flow. (e) Aerial snow d (h) 1953-67 adjusted av	epth g erage.	age,	water) 1953	conter -67, 1	it esti 5 year	o report. (c) Not scheduled. (d) mated. (f) Nearest current data. (average. (j) Telephonic report - o for 5 or more years in base peri	(g) Par data	tly e	stima	ed.	

APRIL 1, 1970

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profil	e (Inches)	Date of	Soil Moisture (Inch			
Name	Elevation	Depth	Capacity	Survey	This Year	Last Year	Average ' ^{///}	
	WYHEE, MAL	HEIJR WATE	Pahena					
			[6.45=				
Bear Creek (Nev.) Big Bend (Nev.)	78 0 0 67 0 0	72 48	16.8 16.7	3/27 გ	11.5	15.2	11.6	
Blue Mountain Spring	5900	42	16.9	3/26	11.5	11.6	11.2	
Crane Prairie	5375	48	18.2	3/26	15.6	17.7	16.3	
Folly Farm	4450	30	12.5	ь				
Jack Creek, Lower (Nev.)	6800	48	8.6	ь				
Jordan Valley	4390	48	19.3	3/27	14.9			
Mud Flat (Ida.)	5500	48	12.8	4/1	14.4	13.8	13.2	
Rodeo Flat (Nev.)	6800	42	11.0	b				
Stinking Water Summit (DISCONTINUED Taylor Canyon (Nev.)	6200	48	15.1	ь			13.8	
Triangle (Ida.)	5150	48	16.6	8			13.8	
irrangic (idd)	0100	10	10.0	Ü				
DIDME DOLDED	DINE CDA	MDE DOMDE	TAMMATIA 1.	was derive				
BURNT, POWDER,								
Blue Mountain Summit	5100	36 36	16.8	3/31	12.9	11.5	11.5	
Dooley Mountain Emigrant Springs	5430 3925	36 48	9.2 22.3	3/26	4.8	3.5	4.5	
Ladd Summit	3925	48	18.9	3/24 3/31	22.2 13.3	21.4 10.7	20.2 11.1	
Moss Springs	58 50	36	25.8	3/31	14.6	14.3	11.1	
Tollgate	5070	48	23.6	3/26	16.8	17.7	19.5	
				.,				
UMATILLA, WALLA WALI	A, WILLOW,	, ROCK, LO	 WER JOHN 1	DAY WATERS	HEDS			
Athena-Weston (DISCONTINUED))							
Battle Mountain Summit	4340	48	13.8	3/24	13.7	13.7	13.3	
Emigrant Springs	3925	48	22.3	3/24	22.2	21.4	20.2	
Tollgate	5070	48	23.6	3/26	16.8	17.7	19.5	
ī	JPPER JOHN	DAY WATER	RSHEDS					
	1							
Battle Mountain Summit	4340	48	13.8	3/24	13.7	13.7	13.3	
Beech Creek Blue Mountain Spring	4800 5900	48	21.3 16.9	3/30 3/26	17.5	14.5	14.4	
Blue Mountain Spring Blue Mountain Summit	5100	42 36	16.9	3/26	11.5 12.9	11.6 11.5	11.2 11.5	
Derr	5670	24	9.0	3/26	8.6	8.9		
Marks Creek	4540	36	14.1	3/25	12.3	12.3	12.6	
Snow Mountain	6300	48	16.7	3/26	13.6	14.8	14.2	
Starr Ridge	5150	36	10.6	3/30	10.6	10.6	10.0	
Williams Ranch	4500	42	17.9	3/30	17.8	17.7	17.2	
	P. F. C. C. T.	G DOO:		~				
	DESCHUTES	, CROOKED						
Derr	5670	24	9.0	3/26	8.6	8.9		
Marks Creek	4540	36	14.1	3/25	12.3	12.3	12.6	
Snow Mountain	6300	48	16.7	3/26	13.6	14.8	14.2	
HOOD, MILE	CREEKS, LO	OWER DESCH	UTES WATER	RSHEDS				
Cooper Spur	3490	72	26.4	3/30	14.9	14.3		
	KLAMATH	WATERSHE	DS 					
Bly Mountain	5090	42	14.0	3/20	12.5	12.3	11.9	
IAVE	COUNTY, GC	OSE LAKE	 WATERSHEDS					
TAKE	•		1					
	Ť	49	14 5	3/98	12 7	_	195	
Camas Creek Quartz Mountain	5720 5230	42 48	14.5 15.3	3/28 3/31	13.7 10.4	 8.6	12.5 8.8	

APRIL 1, 1970

SOIL MOISTURE

DRAINAGE BASIN and/or STATION				e (Inches)	Date of Survey		Moisture (Inc	
Name		Elevation	Depth	Capacity	Survey	This Year	Last Year	Average
]	HARNEY BAS	SIN WATER	SHEDS				
Lue Mountain Spring		5900	42	16.9	3/26	11.5	11.6	11.2
ish Creek		7900	48	15.0	3/30	13.1		
olly Farm		4450	30	12.5	6			
llvies		6900	48	16.4	3/30	13.4	15.3	13.1
now Mountain		6300	48	16.7	3/26	13.6	14.8	14.2
arr Ridge		5150	36	10.6	3/30	10.6	10.6	10.0
inking Water	(DISCONTINUED)							
llow-Bald		5000	24	6.6	3/26	6.4	6.2	5.6

⁽a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

PRECIPITATION (Inches)	CURRENT INFORMATION PAST RECORD					
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precip- itation	Last Year	Average	
Allison Work Center (Harney County)	5320	2/26 to	1 05			
Althouse (Josephine County)	4530	3/26 2/26 to	1.95			
Anthony Lake (Baker County)	7150	3/30 2/20 to	5.18			
Arbuckle Mountain (Morrow County)	5400	3/23 2/27 to	4.75			
Big Red Mountain (Jackson County)	6240	3/25 2/26 to	2.60			
Brooks Meadow (Hood River County)	4320	3/25 2/25 to	6.50			
Camas Creek (Lake County)	5825	3/27 2/26 to	3.00			
County Line (Umatilla County)	4800	3/28 2/27 to	2.90			
Derr G. S. (Wheeler County)	5800	3/31 2/28 to	2.90			
Deer Creek	4554	3/26 2/27 to	2.75			
Dooley Mountain (Baker County)	5200	3/31 2/20 to	5.00			
Granite Mountain (Grant County)	5900	3/26 2/26 to	2.10			
Quartz Mountain Summit (Lake County)	5530	3/25 2/28 to	2.70			
Silver Creek (Lake County)	4900	3/31 2/27 to	1.46			
Strawberry (Lake County)	5760	4/3 2/27 to	2.13			
Summer Rim (Lake County)	7200	3/27 2/27 to	1.50			
Taylor Butte (Klamath County)	5040	3/30 2/27 to	2.40			
Taylor Green (Union County)	5800	3/26 2/25 to	3.02			
		3/31	5.15			

LOCATION ELEV NUMBER NAME LOCATION SEC 14P RGE	V NUMBER MANE COATION ELEV NUMBER NAME LOCATION ELEV SEC. 1+P BOE SEC. 1+P BOE	NUMBER NAME LOCATION ELEV MANGER NAME LOCATION ELEV	NAME TOCATION CLEV
OWYHEE, MALHEUR WATERSHEDS (I) Owyhea River 1653 Proceek (Nev) 31 45N 58E 78500 166700 1667PA Silvies Souch Mountain No.2(Ida) 10 85 5W 18600 1667PA Silvier City (Ida) 65 32 3W 322 322 322 322 322 322 322 322 3	18226a Flag Prairie 32 165 36E 4750 1823 1823 170 1824 1825 18	19D2P	22012 Fourmile Lake 9 MGS 5E 6000
COLUMBIA ROSTLAND COLUMBIA RIVER RIVER	UMATILLA, WALLA WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS 191 Umotillo River 19D2P Arbuckle Mountain 33 4S 29£ 5400 18D14m Athena-Weston Summit 21 4N 35E 1700 18D12P Battle Mountain Summit 29 3S 31E 4340 18D12P Entire Mountain Summit 29 3S 31E 4340 18D5P Lucky Strike 28 3S 32E 5050 18D5 Meacham 24 & 25 1S 35E 4300 18D3M Tollgate 32 4N 38E 5070 18D13 Walla Walla Diversion 22 6H 38E 2400	21E11 Black Pine Spring	20.3156 Boar Flot Mendow 27 36% 10% 59 30.38HP Comman Grows 5 592 21 57 20.514 Cox Flat 16 376 18E 57 20.125 Cox Flat 16 376 18E 57 20.125 Cox Mendo Coll 30 478 11% 559 20.125 Patton Mendow Coll 31 40.01 16% 32 20.125 Patton Mendow 28 20.51 18F 58HP 20.064P Quartz Hountoff 2 78% 16% 551 20.064P State Line Coll 21 48H 11% 597 20.064P State Line Coll 24 40% 16% 574 20.064P Willow Crowk 17 40% 21F 60 Abort Lake
Willamette	Willow, Rock, Walla Walla, Walla Walla River Walla Walla Walla River Walla Walla Walla Walla River Walla W	21E15	20015a four Flat Mendow 27 DG: 19E 590 2001Bay Colvin Crook 12 3071 21E 65E 2001BA Colvin Crook 16 377 18E 597 2014a finley Forral 11 163 161 660 2004A Mill Crook 4 34E 17E 691 2004BP Quartz Rountain 2 18B 16E 532 900BB Summar Valley 15 V?* 21E 66
E LINCOLN POLIS OF RIVER SEED SEED SEED SEED SEED SEED SEED SE	SOW COURSE, SOIL MOISTURE NO ACRIAL MARKER SNOW COURSE, SOIL MOISTURE AND ACRIAL MARKER SNOW COURSE, SOIL MOISTURE SNOW COURSE, SOIL MOIST	Tamarack 8 158 75L 4800 2363 Graylook Pearl 9 403 5W 1600 22626 Hyat Prairie 32 388 4L 4500 22626 Hyat Prairie 32 388 4L 4500 22626 Hyat Prairie Reservoir 15 395 3E 4900 22622 Little Red Mountain 25 403 4W 6500 22622 Little Red Mountain 25 403 4W 6500 2265 Pare Mountain 8 4L5 7H 4045	Silver Loke
1	Watershed Boundory Sub-watershed Boundory Sub-watershed Boundory Sub-watershed Boundory Snow Course Lote PP B L Snow Station Watershed Boundory Snow Course PP B L Snow Station Watershed Boundory Snow Course 1863 1866 1865 1866 1866 1866 1866 1866	21D23	Council Coun
G 2263 2263 2263 2263 2263 2263 2263 226	Harney Basin 1867 Harney Basin 1867 Alward Alward	21D22 Clear Lake Experimental 29 45 9E 3500 22F17 Trap Crowk 1 278 48 3800 22F16 Hogg Pass 24 13S 7½E 4755 22F1 Whaletack 13E 2F 5140 22F15 Whaletack 13E 2F 5140 22	Donner Und Bilizen River 18F50 Buck Parture 21 Yest 155 5700 18G286 Fish Creek 4 Yest 135 5700 19G10 Bart Mountain 1 117 25f 635 19G10 1
20 0 20 40 60 SCALE IN MILES 123° 122° 122° 121°	119° 18 17 16 15 14	21D14P* Photox Point 25 3S 9E 5400 21G6a Dog Hollow 1 40G 14L 4300 21D9 Still Creek 25 3S 8I E 3670 20G14a Pinlay Corrain 11 36C 16F 6600 Map and Index to OREGON SNOV	1858a Huck Pin Lare 2 305 301 5200



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon State Engineer and Corps of State Watermasters
Oregon State Highway Engineers
Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce

Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Land Management
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
National Park Service

Department of National Defense Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company Portland General Electric Company California-Pacific Utilities Company

MUNICIPALITIES

City of Baker City of La Grande City of The Dalles City of Walla Walla

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The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE 1218 S.W. WASHINGTON ST. PORTLAND, OREGON 97205

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